ATTACHMENT 13
IRWM Plan - Reduce Delta Dependence

The Kern IRWM Region receives water supplied from the Sacramento-San Joaquin Delta, via both the State Water Project (SWP) and Central Valley Project (CVP). *This Attachment summarizes the portions of the plan that address how implementation of the Kern IRWM Plan will help reduce dependence on the Sacramento-San Joaquin Delta for water supply, and includes relevant plan excerpts to support the summary.* The Kern IRWM Plan contains objectives intended to augment and diversify the water supply portfolio of the Kern Region, with a focus on local/regional projects such as those contained in the Plan Prioritized Project List and those submitted in this Proposal. These measurable objectives are listed below, with examples of the water management strategies that will be utilized to achieve them.

13.1 Increase Water Supply (Plan Section 10.2.1)

A reliable water supply is necessary to protect the economic vigor of the Region. Water supplies that are utilized in the Region; the SWP, CVP, and local surface supplies from Kern River and other local streams, as well as the largest common groundwater basin, the San Joaquin Valley groundwater basin, all are impacted by reliability issues.

Since 1994, the two large projects that import water into the Kern Region, the CVP and the SWP, have been incrementally impacted by environmental and regulatory requirements that have served to diminish the ability of the projects to reliably deliver water supplies. Even more recently, additional restrictions on the water projects were announced at various times, further reducing the amount of water available. These cutbacks have occurred in agricultural communities in the Kern Region and have caused severe economic impacts to the Region and to its DACs in particular.

Groundwater has long been a variable resource as it has been pumped in the region since the 1800s when the area was settled. Today groundwater provides approximately 45 percent of local water needs; however the resource is in overdraft in many parts of the Region and thus is dependent on imported water to enhance reliability.

Legislation has been enacted to reduce various sectors' dependence on potable water and on the Sacramento-San Joaquin Delta. Thus the Stakeholders have identified the following measurable objectives related to "Increase Water Supply" within the Kern Region:

Through cooperation and collaboration with other regions restore water supplies to levels that will mitigate for water lost from the region and eliminate overdraft (400,000 – 1MAF)

Stakeholders estimate that between 400,000 AF to 1 MAF have been lost to the Kern Region as a result of environmental regulations (i.e., reductions in SWP supplies to the region), drought conditions, out of basin transfers, etc. Implementation of projects that would contribute to this target would help to meet the overall water supply needs for the Region.

Pursue and implement cost effective water use efficiency programs (conserve 30,000 AFY by 2030)

As part of the 2009 Delta Legislative Package, SBX7-7 calls for a 20 percent reduction in per capita water use statewide by 2020. The 2020 daily per capita water use target established for the Tulare Lake hydrologic region is 188 gallons per capita per day (gpcd). The Kern Stakeholders have set target goals of 10% conservation savings from agriculture and 20% conservation savings from urban uses, the latter of which can be used to help meet the 20x2020 goal, where conservation measures have not already been implemented, for a total of approximately 30,000 AF by 2030.

Increase water storage capacity in the region by increasing recharge acreage and expanding groundwater banking programs before all prime recharge land has been developed (8,000 recharge acres as soon as practicable)

Prime recharge land is important because of its watershed functions; filtration of surface water and stormwater detention. Within the Kern Region, these land use types have been decreasing as urban

landscape expands. According to Kern County planning staff, an estimated 8,000 acres of prime recharge land are not currently contained within existing specific plans or other planning documents. Therefore, the goal is to keep these acres undeveloped and retain their watershed function.

Integrate management of water banking facilities to maximize conjunctive use over the planning horizon

Groundwater banking programs are widely used in the Kern Region; conjunctive use programs have been utilized in the region since the early 1900s. Many well-known and successful groundwater storage programs exist in the Region. Conjunctive use refers to the coordination of surface water and groundwater resources to maximize the utility of an area's collective water resources and involves using surplus surface water when available (e.g., storm runoff, surplus surface water flows, or recycled water) to recharge the groundwater basin containing storage capacity. Groundwater banking is a form of conjunctive use wherein surplus surface water or other available waters are injected or recharged for storage in the aquifer, and then extracted at a later time when surface water supplies are limited.

Part of the impetus for the Kern IRWMP is to identify infrastructure issues and potential collaborative projects to address infrastructure needs.

Increase/augment water supplies to meet region demands (e.g., municipal and industrial, agricultural, environmental) by 2050.

The Kern Region is highly dependent on imported water, as discussed above and in Plan Section 2, Sections 2.6 and 2.10.4. Given this dependence, all elements of its reliability should be considered. Fluctuations in delivery due to climatic changes have to be incorporated in supply and demand analyses in UWMPs. The planning horizon for these assessments, according to the new requirements for the 2010 UWMPs, is out to 2050. Therefore, this objective has a measurable planning target out to 2050 to be consistent with the UWMPs.

13.2 Improve Operational Efficiency (Plan Section 10.2.2)

Improved operational efficiency would result in decreasing the amount of energy, labor, and other materials (e.g., water treatment chemical supplies) needed to move water from its source to the customer. Related to operational efficiency, the Stakeholders have identified the following objectives and resource management strategies:

Increase transfers and exchanges flexibility over the planning horizon, including possibly consolidating the SWP and CVP place of use

Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon

Increase distribution efficiencies and reduce energy usage over the planning horizon

Increase the use of alternate energy sources (e.g. solar) (33% of energy provided by alternative sources to the region by 2020)

This measurable objective is based on Governor Arnold Schwarzenegger's EO directing CARB to adopt regulations increasing California's Renewable Portfolio Standard (RPS) to 33 percent by 2020, which was first established by the Governor's directive in 2008. The Governor's EO upholds California's leadership in environmental policies and builds on AB 32 goals by ensuring California will have the flexibility needed to use renewable energy sources for 33 percent of our state's energy consumption by 2020. In addition, this objective addresses the region's need to mitigate climate change effects through the reduction of GHG emissions.

Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions (less than 10% losses in urban systems; replace 10% of all systems)

This target stems from the regulatory requirement that calls for less than 10% losses in urban distribution systems and expanding that requirement region-wide to produce a larger benefit.

Increase the use of recycled water for direct reuse within the Kern Region (20% of produced wastewater annually)

This target was meant to focus recycled water on direct reuse, as all wastewater is put to beneficial use through recharge. Direct reuse is considered to be application to crops and landscape irrigation. A target application of 20% of produced wastewater annually was chosen as it could be measured and incrementally increased throughout the planning horizon.

Optimize local management of water resources to improve water supply reliability over the planning horizon

Increase pool of qualified candidates to operate water and wastewater systems (20% increase in employees trained by 2020; reduction in water/wastewater job vacancies)

This target is an estimate from the County's Waste Management staff based on existing vacancies and growth projections/demands for the County. It translates into roughly 40 operators trained and certified by 2020.

Establish a consolidated place of use for the CVP and SWP

Currently, the CVP and SWP places of use are inconsistent with one another in the Kern Region. This limits the operational flexibility of local water purveyors and the extensive groundwater banking projects throughout the Region. Operational flexibility is a crucial component of water management in the Kern Region, where surface supplies are variable due to hydrology and regulatory impacts to the CVP and SWP. Establishing a consolidated place of use would improve operational efficiency by enhancing opportunities for operational exchanges and groundwater banking.

13.3 Promote Land Use Planning and Practice Resource Stewardship (Plan Section 10.2.4)

Water is intended for many beneficial uses including urban and agricultural water supplies, groundwater recharge, water replenishment, recreation, wildlife habitat, rare and endangered species, and wetland ecosystems. To this end, Stakeholders have investigated multiple objectives related to resource stewardship, including removal of invasive species, acquisition of floodplain areas for recreation and flood easements, and acquisition of habitat.

Stakeholders have identified the following measurable objectives related to resource stewardship:

Promote stewardship of the local rivers and streams by applying appropriate measures in various reaches of the river from this point forward

This objective acknowledges the benefits of the Kern River that are worthy of protection; environmental, biological, economic, cultural, hydrological, agricultural, etc. By acknowledging that the Kern River is a resource to be protected, these beneficial uses can be contributed to by the projects implemented in this IRWMP.

Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations (no more than 5% of plant matter in waterways will be non-native beginning in 2010)

This objective is to remove non-native plant species and promote revegetation by native plant species in the Kern River. The measurement is intended to prevent establishment of new species of invasive plants within the watershed, as it is the most cost effective way to control these plants and prevent further habitat degradation and impacts to operations. This measurable objective takes into consideration current quantities and types of invasive species as well as what can realistically be reduced/removed from the watershed.

Identify and promote the regeneration and restoration of native riparian habitat (460 acres of restored/regenerated riparian habitat)

Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward

As discussed in Plan Section 2, there is an estimated 833,452 acres of irrigated crop land in the Kern Region. Agriculture is an important industry for the Kern Region. In addition to direct production of food and fiber, secondary employment is created by the agricultural production, including transportation and food manufacturing. The demand for urban development is resulting in a conversion of agricultural land, and is introducing conflicts between agricultural and residential development. As a result, agricultural land is increasingly found only on the urban fringes. There is a desire to preserve agriculture as an industry and as a cultural asset. To encourage the retention and expansion of agricultural use both within and outside a potential agricultural preserve, local policies promote compatible land use arrangements and offer technical assistance in support of farming interests. In addition, expansion of agricultural into underutilized lands, such as utility rights-of-way and flood prone areas is encouraged.

Improve the linkage between land use planning and water supply in the region throughout the planning horizon

Coordination between land use planning agencies and water management agencies is crucial to implementation of a successful IRWM Plan. A regional land use management plan to guide the Kern Region's development would be a key step towards improving coordination and identifying future water needs throughout the Region. Growth management, the protection of various land uses and the efficient use of natural resources such as land, water and energy are three of the principal goals of regional land use planning.

Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon

The Kern IRWM Plan provides a positive model for the general public to reference as water districts and municipalities move forward in asking Stakeholders to become more efficient in their water usage. Increasing educational opportunities for local residents on the basics and importance of using appropriate amounts of water for irrigation, of awareness of water supply, conservation, and water quality will be important if the end result must be a significant reduction in overall water demand. These types of programs help to improve local water supply reliability.

Improve and coordinate integrated land use planning to support stewardship of environmental resources, such as local rivers and streams and the Kern Fan, and integrate with habitat conservation plans and other ongoing planning efforts from this point forward

Preserve and improve ecosystem/watershed health throughout the planning horizon

The Kern Region is subject to increasing demand for community development, recreation, and resource utilization. Population in the Kern Region is expected to increase by about 35% between 2010 and year 2030. Some of this growth will result in the conversion of agricultural land, while some of this growth will occur in areas that are currently natural and undeveloped areas. Loss of both agricultural acreage and natural areas decreases the amount of open space in the Region. This growth and the associated loss of open space could adversely affect local water resources through the loss of wetland areas and the watershed functions these areas provide (filtration of surface water, stormwater detention).

Also of concern is the negative effect of urban growth on the unique biological resources of the Region. Besides a direct loss of habitat, increasing proximity to urban development is harmful to the sensitive desert species, several of which are found only in the Kern Region. Thus the RWMG found it important to make preserving and improving the ecosystem/watershed health throughout the planning horizon (2050) an objective of the Kern IRWMP.

Assurances that any revised or subsequent IRWM Plan will continue to help reduce dependence on the Sacramento-San Joaquin Delta for water supply:

As described in the above discussion of objectives, water use efficiency, recycled water, conjunctive use, groundwater banking and groundwater management will continue to be critical strategies in the Kern IRWM Plan for increasing local water supply reliability. Urban water suppliers in the Region will continue water use efficiency efforts to meet new per capita demand reduction targets set forth in the water code through SBX7-7. Efforts to expand water recycling are ongoing. Reducing demand will continue to be

central to the IRWM Plan given the Region's ongoing need for imported water, the increasing cost of that water, and its increasingly uncertain reliability.

Plan Section 12.5 and its subsections memorialize Kern RWMG and Stakeholder Group discussions in stakeholder meetings as to the type of governance structure that would be needed to sustain the Kern IRWM Plan in the years following completion and adoption of the Plan. The Participants and Executive Committee will continue discussions about regional planning and changes to the IRWMP over the long term. Major topics of these discussions, which were agreed upon by the RWMG and Stakeholders, are Organization, Roles, and Representation and Decision Making.

When the Plan was updated in late 2011 and adopted in early 2012, the Plan Update reflected the Governance Structure, Plan Prioritization Process and how the Plan itself will be updated, amended and adopted through time. The Plan Adoption and Amendments process is discussed in Plan Section 12.6.

Amendments to the plan may be proposed by any member of the Stakeholder Group, and require approval of the RWMG by a simple majority vote, and a public hearing to notify the public of the RWMG's intention to adopt an amended plan. At a minimum, the following elements of the Kern IRWMP shall be contained in appendices to the plan: Kern IRWMP Governance Structure, Project Prioritization Process, and Project List. Changes to the plan's appendices may be proposed by any member of the Stakeholder Group and may be amended by a simple majority vote of the RWMG. Amendment of one or more of the appendices, in part or in whole, does not require re-adoption of the plan by the RWMG.

Plan Section 12.7 discusses the IRWM Plan Term. The term of the Kern IRWM Plan will be 20 years from initial adoption, with updates and subsequent re-adoption by the parties described below, occurring a minimum of every five years within that 20 year timeframe, unless one or more of the following events triggers re-adoption prior to the scheduled five-year interval: Significant change in conditions as defined by the RWMG with input from the Stakeholders; Achievement of an objective which necessitates setting a revised or replacement regional objective; or the need, as determined by the RWMG with Stakeholder input, to set new regional objectives.